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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/668,387

09/23/2003

Zheng Tan

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EXAMINER

FORTUNA, JOSE A

ART UNIT

PAPER NUMBER

1741

MAIL DATE

DELIVERY MODE

12/23/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/668,387	Applicant(s) TAN ET AL.	
	Examiner José A. Fortuna	Art Unit 1741	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 November 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,4,7,9,20-34,36 and 38-41 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,4,7,9,20-34,36 and 38-41 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 4, 7, 9, 20-26, 28-34, 36 and 38 are rejected under 35 U.S.C. 102(b) as being anticipated by Kubelka et al. in “Delignification with Acidic Hydrogen Peroxide Activated by Molybdate.”

Kubelka et al. teach a process of treating softwood fibers by subjecting a softwood pulp to a solution containing peroxide and a transition metal salts, Molybdate and Tungsten, at pHs between 2 to 5; peroxide concentration between 0.5-2% and transition metal level up to 1000 ppm, (0.1%). See table VII. Table II shows temperatures of 85°C and residence times of 2 hrs. The data in table II shows decrease in viscosity by the treatment and table VIII shows that the pulps were refined, i.e., beaten. Kubelka et al. also teach the use of pre-bleached pulps and the same softwood fibers as claimed, see Table I for the pulps and Tables IV-V for the bleached Kraft pulps.

Claim 33 is a product by process claim and the pulp produced by Kubelka et al. teaches a pulp which is the same as the ones claimed, since they teach the same process of making and they use the same raw materials. As the afore mentioned claims are product by process claims, it is deemed that “[A]ny difference imparted by the product by process claims would have been obvious to one having ordinary skill in the art at the time the

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invention was made because where the examiner has found a substantially similar product as in the applied prior art the burden of proof is shifted to the applicants to establish that their product is patentably distinct, ..." In re Brown, 173 U.S.P.Q. 685, and In re Fessmann, 180 U.S.P.Q. 324. Further, "[P]rocess limitations are significant only to the extent that they distinguish the claimed product over the prior art product." In re Luck, 177 U.S.P.Q. 523 (1973)

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

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invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 3, 27 and 40-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kubelka et al., (cited above) in view or any of Sun et al., in " The effect of metal ions on the reaction of hydrogen peroxide with Kraft lignin model compounds;" or Leporini et al. in HYDROGEN PEROXIDE IN CHEMICAL PULP BLEACHING -an overview-;" or Rahmawati et al. in "Pulp bleaching by hydrogen peroxide activated with copper 2,2_-dipyridylamine and 4-aminopyridine complexes;" or Ruuttunen et al. in "CONCOMITANT USAGE OF TRANSITION METAL POLYANIONS AS CATALYSTS IN OXYGEN DELIGNIFICATION: LABORATORY BLEACHING TRIALS."

Kubelka et al. do not teach the use of other transitional metals for the activation of the peroxide. However, the secondary references teach that other transitional metals, including copper and iron can be used to activate/catalyze peroxide to delignify or bleach cellulosic fibers. Therefore, substituting the transition metal taught by Kubelka et al. with iron and copper would have been obvious to one of ordinary skill in the art since he/she would have reasonable expectation of success if such metals were used, since they have been used for the same purpose. "[W]here two equivalents are interchangeable for their desired function, substitution would have been obvious and thus, express suggestion of desirability of the substitution of one for the other is unnecessary." In re Fout 675 F. 2d 297, 213 USPQ 532 (CCPA 1982); In re Siebentritt, 372 F.2d 566, 152 USPQ 618 (CCPA 1967). Also, it has been held that it is obvious to try, choosing from a finite number of identified, predictable solutions with a reasonable expectation of success. See

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recent Board decision Ex parte Smith, --USPQ2d--, slip op. at 20, (Bd. Pat. App. & Interf. June 25, 2007) (Citing KSR, 82 USPQ2d at 1396).

Response to Arguments

6. Applicant's arguments with respect to claims 1, 3-4, 7, 9, 20-34, 36, and 38-41 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure in the art of "Peroxide Treatment of Softwood Fibers."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to José A. Fortuna whose telephone number is 571-272-1188. The examiner can normally be reached on 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew J. Daniels can be reached on 571-272-2450. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/José A Fortuna/
Primary Examiner
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JAF